Residential Property Tax Reform in Northern Ireland: Impact Analysis and Spatial Redistribution

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The treatment of housing for local rates (property tax) has been the subject of a continuing debate in the United Kingdom (UK) for decades, as it has been in many other countries. The domestic sector in Northern Ireland has recently been subject to rating reform and a revaluation to a capital-improved basis. Previously, the domestic sector was valued on the basis of rental values prevalent in the late 1960s for the 1976 General Revaluation (the last time domestic property was revalued). The valuation list was therefore out of date, and there were significant anomalies in the way it distributed the rate burden. As a result, inequities had built up over the years with the loss of a clear relationship between tax bills and current market values.

Northern Ireland recently moved to a capital value system, and the remainder of the UK is considering a number of options for reforming public finance. To assess the wider implications of a change in the domestic rating for Northern Ireland, we conducted a research study to determine the likely redistributive effects of such a change to inform policy makers and decision makers on the future direction of domestic rating in Northern Ireland and elsewhere. A geographic information system (GIS) also was used to show the spatial distribution of tax and the effect of a shift from the previous net annual value (NAV)-based domestic rates to one based on capital values. We found that a discrete value system performs well in terms of minimising the number of losers (taxpayers with higher levies) and providing a fairer and more equitable local tax and that impact analysis has an important role to play in property taxation policy making.

Background

Through the 1970s, 1980s, and 1990s, there has been an intensive and extensive investigation into the fairest and most equitable manner by which locally based rating revenue can be raised (Hills and Sutherland, 1991; Layfield Committee 1976; Midwinter 1989; Ridge and Smith 1991; Smith and Squire 1987). The whole question of domestic property rate reform in Northern Ireland has to a large

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extent been overshadowed by events in the rest of the United Kingdom. Neither the Community Charge nor the Council Tax has been imposed in Northern Ireland. The so-called "Troubles" may have had a large part to play; however, with the devolution of powers to a newly formed Northern Ireland Assembly in 1998, the potential role of rates began to take centre stage. (The Northern Ireland Assembly was established as part of the Belfast Agreement [otherwise known as the Good Friday Agreement] on April 10, 1998. The agreement set out the plan for devolved government including the creation of the Assembly and Executive.)

The Programme for Government 2001–04 (Northern Ireland Executive 2001–2004) indicated the importance of ensuring that local revenue is raised in ways that are fair, taking into account the objectives of targeting social need and promoting equality of opportunity. The then Minister of Finance and Personnel announced the Review of Rating Policy in March 2001 to evaluate the current system and possible alternatives. *The Review of Rating Policy: A Consultation Paper* was published in May 2002 (Northern Ireland Executive 2002a). Despite the suspension of the devolved administration in October 2002, the review is seen as a central platform for delivering a fair and equitable local rating system. Underpinning the review is the fact that the Reinvestment and Reform Initiative for Northern Ireland allows the Executive to borrow funds for infrastructure investment, with the loans being serviced by additional local revenue, that is, local rates (Northern Ireland Executive 2002b). (The Reinvestment and Reform Initiative, announced on May 2, 2002, is aimed at addressing the long-standing problems in the major public services of health, education, roads, water, and sewerage.)

The primary aim of Domestic Rating Reform is to achieve a balance between economic efficiency (those who benefit from services, pay) and fairness or equity (those who pay, can pay). The reform replaces the current rental value system with one based on capital values; at the same time, all properties are being revalued for the first time since 1976. As a result, there will be a significant redistribution of the rate burden, although the actual impact is likely to be cushioned by a transitional relief scheme (which is outside the scope of our study). This reform provides an unusually informative opportunity to study the impact of these changes on the residential property sector.

Undertaking this type of redistributive analysis is largely dependent upon having access to data of high quality and in sufficient quantity. Earlier studies that examined redistribution effects were, to a large extent, constrained by the availability and quality of the data. Research conducted by Evans (1976) was based on data from a 20 percent sample survey of sales reported to the Inland Revenue. Evans found that, overall, 55 percent of dwellings would be entitled to a reduction and 45 percent would have an increase. Ford and Brown (1978) based their results on a sample of 249 sales (for the town of Woking). They found that properties close to the city centre would be beneficiaries, whereas properties in suburban areas would face rate increases. Wyatt (1982) found that an increase in rates would shift from newer to older properties, from smaller to larger properties, and from cheaper to more expensive properties. He utilised a workable sample of 620 dwellings for the city of Derby. However, only asking prices, not actual selling prices, were available. Hattersley, Lizieri, and Chandler (1989) studied 1,279 properties (for England and Wales) drawn from the Department of the Environment/Building Societies Association's 5 percent Survey of Building Society Mortgages for a single month (June 1987). They found that 52 percent of dwellings would have a reduced rating liability and 48 percent would have an increase. In addition, they found that higher-priced dwellings would carry a higher rate burden under a capital value system and that lower-priced properties would have their rate burden reduced.

In our study, we analysed the effects of the rating changes on a sample of 46,407 sold properties. Utilising GIS, we generated maps that showed the distributional impact of a shift in tax bills from the current NAV system to the alternative of a capital value system. We studied the relationship of tax incidence to a measure of ability to pay at a ward level (the spatial units used to elect local government councillors). The measure, income deprivation, was compiled by the Social Disadvantage Research Centre (SDRC 2001) and is one of the accepted benchmarks for assessing deprivation for Northern Ireland policy makers. This measure allowed us to compare the redistributive results with levels of deprivation in order to determine whether the reform is improving or worsening ability to pay at the ward level.

The next section discusses the current rating system and the basic policy options available. The data and methods used in analysing these options are then outlined, and the redistributive impact of the reform is examined. The main findings are drawn together in the final section.

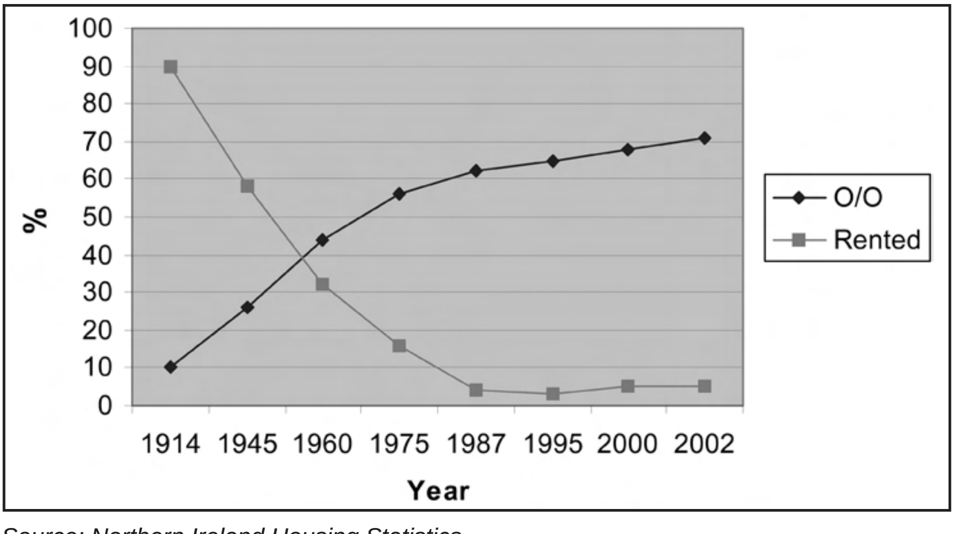
The Pre-reform Domestic Rating System

The domestic rating system in Northern Ireland has remained virtually unchanged since its statutory inception in 1852. The basis of rating is an assessment of the hypothetical Net Annual Value for each rateable property; the rate liability is simply calculated by applying a rate in the pound to the assessed NAV. Net annual value is defined as follows:

> *...the rent for which, one year with another, the hereditament might, in its actual state, be reasonably expected to let from year to year, the probable average annual cost of repairs, insurance and other expenses (if any) necessary to maintain the hereditament in its actual state, and all rates, taxes or public charges (if any), being paid by the tenant. (Schedule 12 Part 1 of the Rates [Northern Ireland] Order 1977)*

In the mid-nineteenth and early twentieth centuries, the predominant tenurial form was based on the renting of property. As figure 1 illustrates, there has been a significant structural change in the residential market with a marked decline in the rental sector in comparison to the growth in levels of owner occupation.

Figure 1. Structure of the residential property market in Northern Ireland by tenure type



Source: Northern Ireland Housing Statistics

The future shape of the domestic rating system therefore must recognise the availability of market evidence. In this regard, the continued use of a rental-value-based approach would be difficult to sustain simply on the basis of availability of sufficient transaction evidence (Layfield Committee 1976; McCluskey, Plimmer, and Connellan 1998; Wyatt 1983). The Reform of Rating Policy consultation document (Northern Ireland Executive 2002b) indicated that to retain a local rating system, the primary option would be a capital-value-based approach. The arguments in support of capital value rating are persuasive; for example, substantial information is available to valuers on open market selling prices. In addition, there would be greater transparency because ratepayers would have a better understanding of the rationale behind assessed values.

The shift to a capital value solution for Northern Ireland has, in essence, two aspects: (1) whether to implement a property-value-banded system, as used in the rest of the UK, or (2) whether to introduce a discrete capital value approach. This leads on to an interesting question for local governments in the remainder of the UK: Should they retain a banded system or move to a discrete system, if they indeed opt to retain a property tax? The recently concluded Lyons Inquiry into Local Government (2007) conducted a wide-ranging investigation into these matters. The result was a recommendation that the Council Tax be retained in the short term and revalued in the medium term, with an option of reform to discrete values in the long term.

Under a discrete capital value system, each individual property is given an assessed capital value. A banded capital value system, as used in the rest of the UK, categorises property by reference to a value band. In essence, a broad estimate of a property's capital value is made, and then it is allocated to the appropriate band (McCluskey, Plimmer, and Connellan 2002). In contrast to value banding, which has extremely limited international usage, a discrete value approach has widespread application (Bird and Slack 2004; McCluskey, Lim, and Davis 2004; McCluskey, Plimmer, and Connellan 1999). Furthermore, research carried out in each of the three Great Britain jurisdictions indicates that the current Council Tax system is highly regressive (Convention of Scottish Local Authorities 2001; Giles and Ridge 1993; Institute of Revenues, Rating and Valuation 1999; Kenway and Palmer 1999; Longley, Higgs, and Martin 1996; Plimmer 1999; Plimmer, McCluskey, and Connellan 1999; Welsh Assembly Government 2002). Whilst more progressive banding approaches could be used, evidence suggests that a discrete value approach is likely to produce optimum property tax performance in terms of vertical and horizontal equity and ability to pay (Davis, McCluskey, and Lim 2004).

Data Sources and Database Construction

The property sales data supplied by the Valuation and Lands Agency (VLA) covered a five-year period from 1998 to 2002. For quality control, we excluded from these data first-time sales from developers, sales from the public sector to tenants under the "right to buy" scheme, agricultural dwellings whose selling price included agricultural land, and any cases which evidenced data entry problems. The data were further cleaned by removing properties with obvious data errors and blank fields. The total number of usable sales for all 26 district councils was 46,407, or approximately 7 percent of the total dwelling stock.

Given that data over a five-year period were used, it was necessary to adjust selling prices to a common valuation date, that is, April 1, 1999. Applying this common valuation date allowed for a more objective cross comparison between the various district councils. A time-adjusted sales price (TASP) was calculated by using a regression-based technique that calculates the monthly growth rate implied by the data. An implied monthly growth rate index was calculated for each district council. These indexes were then used to adjust each sale price to reflect its assumed value at the common date. Whilst the market for each property type or each area within a district council may not have performed equally over the period, this methodology gives the most accurate estimate of house prices on a common date. The approach is well documented (Gloudemans 1999) and is accepted for adjusting sales price and value through time.

The selling price for each dwelling has been used as a proxy for the assessed value under a capital value rating system (Hattersley, Lizieri, Chandler 1989). There may be cases in which the selling price may not be an accurate and objective proxy for assessed value, for example, a special purchaser or sales to connected parties. However, in the majority of cases, it is reasonable to assume that normal market forces and buyer and seller behaviour occurred and thus determined the open-market selling prices. The research aggregates the data to the ward level, which gives a fairly robust picture of average capital values.

From the TASPs calculated for each property, we calculated the new tax bills under the capital value system. The calculation assumed a revenue-neutral position based on the current revenue raised by the sample. These tax bills were then compared with the tax bills generated under the old system to analyse the likely redistributive effects of the change in the basis of domestic rating. The results of the individual-level analysis were aggregated to the ward level to allow meaningful analysis of the effects. Whilst ward-level analysis can give only a broad indication of effects, it nonetheless illustrates broad trends and identifies notable "hot spots" of change, which would present policy makers with particular challenges.

Results and Discussion

Hot-spot Analysis—Redistributive Effect at District Council Level

Any changes in a system of taxation are likely to have an impact upon those upon whom the tax is levied. A change in the way liability is assessed is likely to have an uneven effect: the creation of "winners," taxpayers whose levies are less under the new system, and "losers," taxpayers whose levies are more. In terms of tax proposals, this result requires analysis of the ability to pay. Internationally, property value is taken to be an acceptable proxy for the ability to pay a property tax, but this is by no means universally accepted and is certainly not enshrined as such in the UK context. Nonetheless, there is generally a positive relationship between an individual's ability to own and/or occupy property and his or her wealth. Thus there is at least a loose relationship between the value of property and the ability to pay a tax levied upon that value. In these terms, ability to pay is linked to the concept of a proportional, or progressive, tax system. Thus, a proportional, or progressive, tax system also achieves a positive outcome in terms of ability to pay under that system, at least to some extent. To determine the relative merit of rating reform in terms of ability to pay, we analysed the data delineated by ward in terms of the ward average income deprivation measure (SDRC 2001) and aggregated for analysis and display purposes.

Each district council was considered separately in terms of the actual redistributive effect. Table 1 shows the overall results at the district council level in terms of winners (those with lower liabilities, a ratio of less than 1.0) and losers (those with higher liabilities, a ratio greater than 1.0). In overall terms, a change to discrete capital value rating would result in approximately 61 percent of all ratepayers (within the sample) being entitled to reduced rate liability. This percentage would vary by district council, the largest percentage of winners being in Armagh (70 percent), Ards (67 percent), and North Down (66 percent), and the largest percentage of losers being in Newtownabbey (46 percent), Moyle (45 percent), Larne (45 percent), and Ballymoney (44 percent).

Figures 2, 3, and 4 provide a Northern Ireland overview of the main hot spots in terms of rate liability shifts. For example, in the Armagh district council, 70 percent of all property owners would receive reductions, whereas in Larne 55 percent would receive reductions and in Belfast, 61 percent.

Hot-spot Analysis—Redistributive Effect for Belfast Urban Area

Having looked at the redistributive effects of changing to a capital value system on a Northern Ireland-wide scale, we drilled down to examine more closely the effects within the Belfast City area, the capital of Northern Ireland. This analysis is useful because Belfast has both large concentrations of high-value properties and areas of high deprivation. Of the 51 Belfast wards, 35 would on average experience a fall in rate liability and 16 would experience an increase. Those wards with the largest increases would be Ballynafeigh, Botanic, Malone, Stranmillis, and Windsor (all amongst the most prosperous wards in Northern Ireland). As figure 5 shows, the following wards would experience the largest reductions: Ardoyne, Ballysillan, Crumlin, Duncairn, Glencairn, Highfield, Legoniel, and Shankill (all amongst the most deprived wards in Northern Ireland).

Figure 6 depicts, on a ward basis, the level of income deprivation compared

Table 1. Redistributive effect of capital value system at the district council level

District Council	Ratio of Liability			
	Winners (Less than 1.0)		Losers (Greater than 1.0)	
	Number	Percentage	Number	Percentage
Antrium	787	61	496	39
Ards	1,660	67	838	33
Armagh	616	70	267	30
Ballymena	987	57	736	43
Ballymoney	316	56	250	44
Banbridge	760	64	436	36
Belfast	4,578	61	2,988	39
Carrickfergus	935	60	624	40
Castlereagh	1,541	60	1,028	40
Coleraine	1,378	62	851	38
Cookstown	323	62	204	38
Craigavon	1,376	59	947	41
Derry	875	57	662	43
Down	1,075	62	659	38
Dungannon	495	62	301	38
Fermanagh	651	63	381	37
Larne	654	55	548	45
Limavady	490	58	357	42
Lisburn	2,647	63	1,552	37
Magherafelt	407	62	255	38
Moyle	202	55	169	45
Newry	810	57	602	43
Newtownabbey	1,591	54	1,363	46
North Down	2,368	66	1,226	34
Omagh	363	61	231	39
Strabane	319	58	232	42
Total	28,204	61	18,203	39

Figure 2. Overall rate liability change at the ward level in Northern Ireland due to capital value system

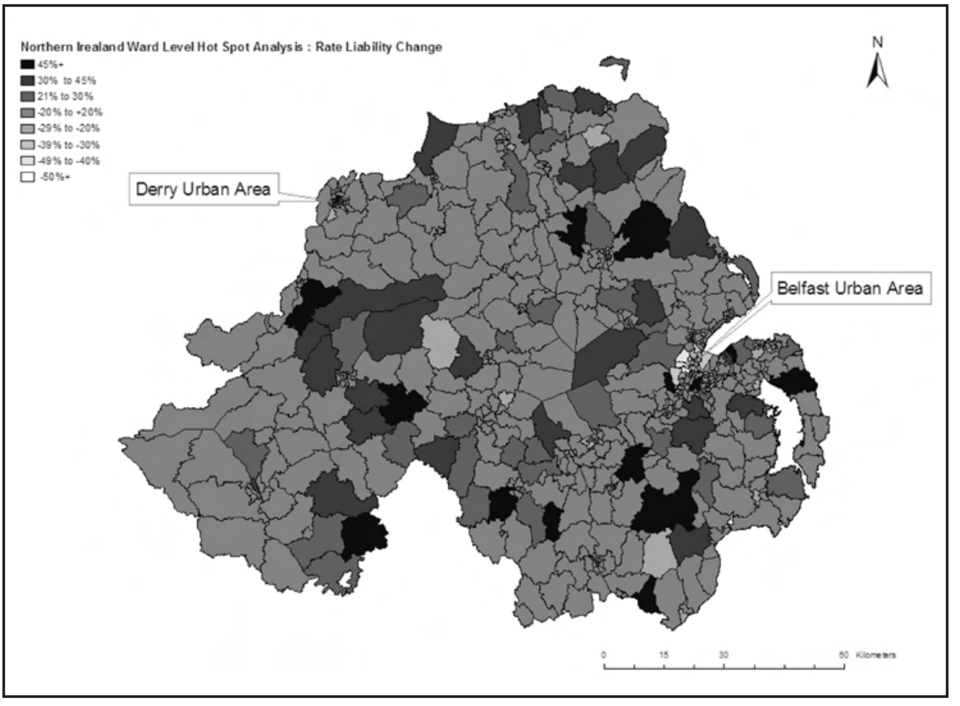


Figure 3. Rate liability increases of greater than 30 percent due to capital value system by ward in Northern Ireland

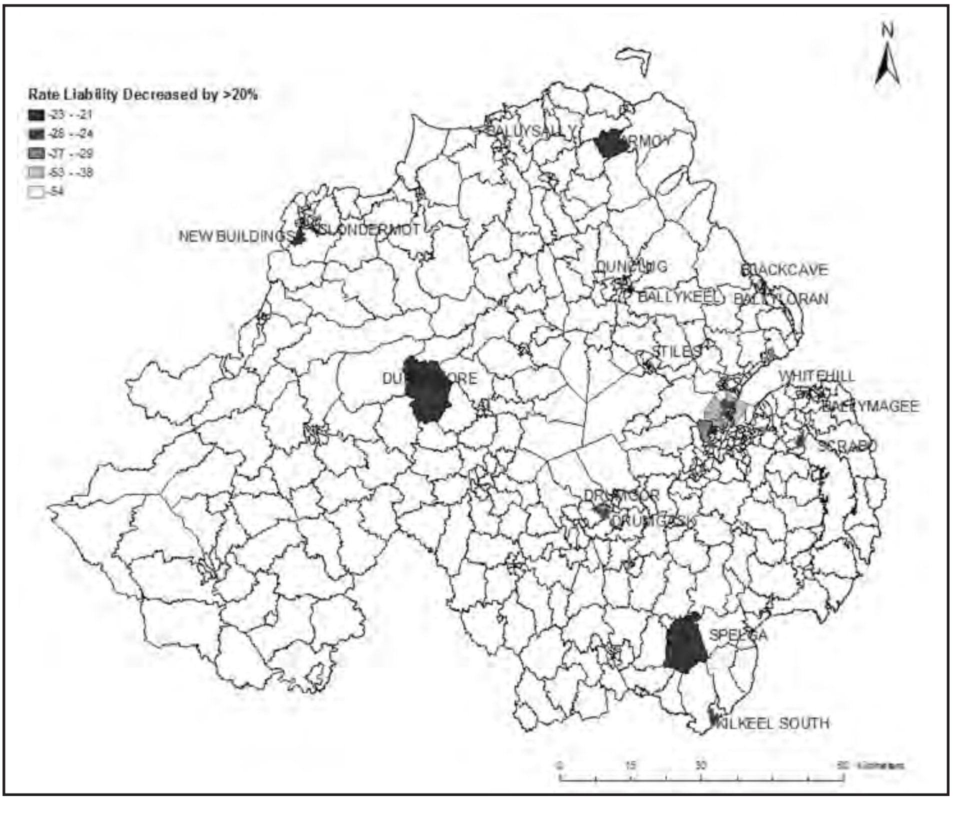


Figure 4. Rate liability decreases of more than 20 percent due to capital value system by ward in Northern Ireland

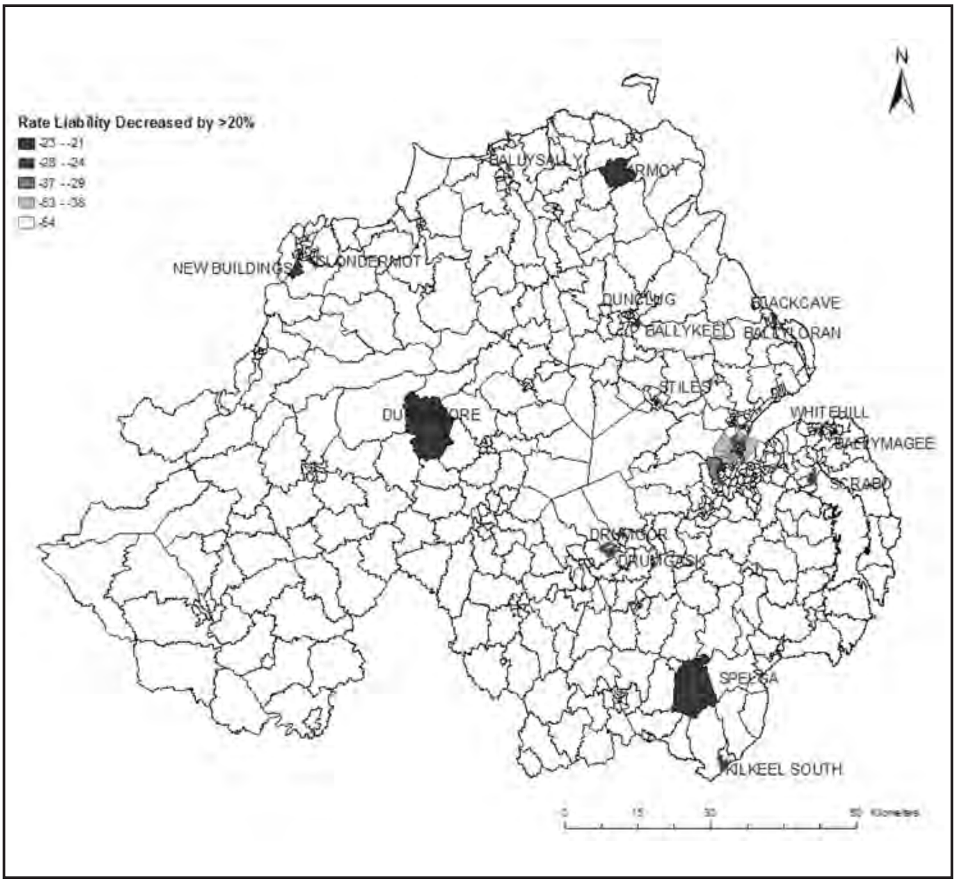
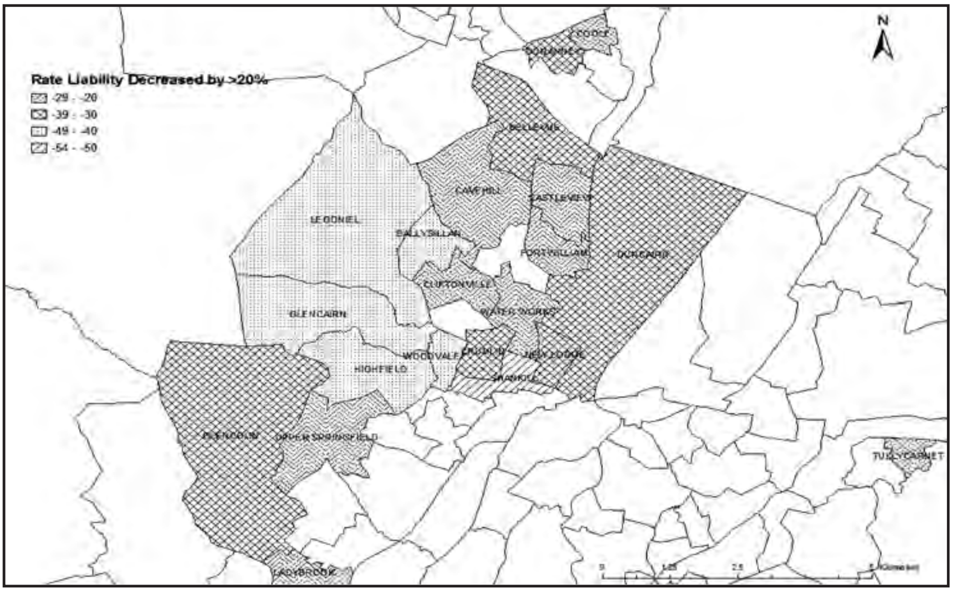


Figure 5. Rate liability decreases of more than 20 percent in Belfast urban area due to capital value system



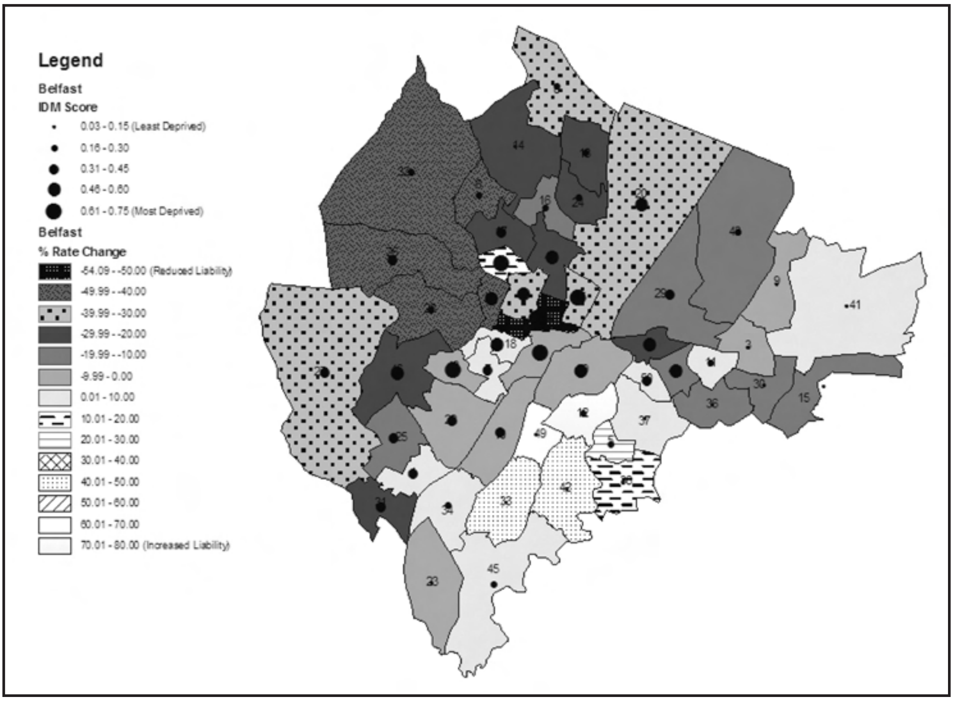
with the percentage rate change. The largest gainers would be households in the more deprived areas, whilst households in the less deprived areas would either gain less or indeed lose. In addition, higher-priced dwellings would carry a higher rate burden, whilst lower-priced properties would have their rate burden reduced. Analysis on a Northern Ireland-wide basis showed that this pattern was generally consistent, with some notable exceptions where the makeup of a ward included disparate elements of very high property values alongside, yet geographically separate from, pockets of extreme deprivation. Note that this analysis measured change from the previous rating system, which already reflected these factors to a greater or lesser extent.

Conclusions

The analysis reported in this paper used GIS to identify the spatial redistribution of property tax bills following a revaluation and change in the tax base. A long period had elapsed since the last revaluation, allowing considerable shifts in relative property values between different geographic areas. It is essential to be able to identify and measure the localized effects of policy changes under such circumstances. Successful tax reform depends upon public acquiescence, which can be jeopardized if the extreme effects of policy are not identified early and planned for appropriately. The spatial dimension of tax incidence is fundamentally important in answering such questions as: *Where* will the difficulties arise? W*here* is this policy weak? And perhaps, *where* is it strong?

A number of important findings from our study illustrate the likely redistributive effects of a move to a capital value rating system. Firstly, introducing a system of discrete capital values will result in a greater number of winners—taxpayers with reduced rate bills. Secondly, whilst lower-valued dwellings will tend to have reduced liabilities, the most expensive properties will experience an increase. Thirdly, from a spatial perspective, a

Figure 6. Percentage tax change in Belfast wards due to capital value system by income deprivation measures (IDM)



general pattern of redistribution was identified in which several inner-city wards and a number of suburban wards will experience increased rate liabilities. Detailed investigation at the property level indicated that a considerable reassignment of property values will take place and result in major changes in tax bills for individual properties, generally following the pattern just described.

In terms of an appropriate system for Northern Ireland, whilst the discrete capital value system that has been introduced does not provide a total local taxation solution, it does provide a feasible alternative to the previous system and a better performance than a banded alternative in terms of ability to pay. Examination of the mapping of the change to a discrete system indicated that although most wards will witness limited change, there are localised hot spots of large increases and decreases in rate burden, particularly in the Belfast urban area. Liability increases raise the issue of affordability; while for liability decreases, the issue is local revenue-raising potential. There may be wider implications for the funding of local and regional government in Northern Ireland—implications that will need to be addressed alongside the ongoing Review of Public Administration programme. Other issues are those linked to any system of taxation based upon capital values, particularly the "asset rich, income poor" issue. All these issues are likely to afflict any capital value system, but are perhaps more pronounced in a discrete approach.

The technological and data issues facing this and other UK jurisdictions in introducing a discrete, capital value property tax system are surmountable, by using a combination of proven techniques and innovative approaches, and provide opportunities for cost-effective periodic revaluation. For the remaining issues, the answer would appear to be a well-balanced basket of reliefs and deferments. Nevertheless, the discrete capital value approach appears to be both methodologically simpler and fairer than the banded approach, as well as more appropriate and feasible than the rental value approach. Given a similar degree of administrative feasibility, we suggest the discrete approach that has been adopted is the approach best suited to the needs of the Northern Ireland jurisdiction for the foreseeable future. We would be overstating our findings if we suggested the introduction of a discrete capital value system into the rest of the United Kingdom, particularly given the highly political nature of property taxation and the necessity of public support for reform. Rather, the likelihood is that such an introduction would produce a similar profile of outcomes, that is, redistribution of the tax burden under a proportional system, creating a far less regressive tax and redistributing tax burden toward more valuable properties in particular and more affluent areas in general.

We have shown that the impacts of the tax reform changes are fairly proportional, although some deprived areas will gain less than the average. Nevertheless, in the switch to a capital value system, although many higher-value properties will no doubt simply see themselves as losing, three-fifths of the households in Northern Ireland will be winners. Our research and findings have strategic importance from a number of perspectives, not the least of which is the contribution to informing the policy debate surrounding the reform of the domestic rating system for Northern Ireland and other jurisdictions. More directly, our findings demonstrate the need for jurisdictions considering reform to carry out impact analyses to inform, guide, and defend policy decisions. Clearly, other areas of research require more detailed investigation, such as the effect of the new system on low-income households, on areas of high deprivation, and, ultimately, on the ability to pay. These areas are part of our ongoing research, and we hope they will further inform the decision-making process.

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